WHAT IS CLAIM IS:

1. A packet receiving method for use on a packet-switching network for handling each received packet, comprising the steps of:

allocating a descriptor and a data buffer, the descriptor for recording a link status between the descriptor and the data buffer and a reception status of a packet, and the data buffer for storing the packet, and the size of the data buffer being fixed;

activating an early interrupt mode and setting a threshold value;

dividing the data buffer according to the threshold value, and setting an early receiving interrupt signal and a ready interrupt signal according to the threshold value;

in response to the early receiving interrupt signal, reading the packet stored in the data buffer; and

in response to the ready interrupt signal, retrieving and forwarding the remained packet data.

2. The method of claim 1, further comprising the step of: performing a write-back operation on the descriptor after all the packet data stored in the data buffer have been forwarded so as to reset the descriptor.

3. The method of claim 1, further comprising the step of: asserting the ready interrupt signal, when the whole packet has completely been moved to the data buffer.

4. The method of claim 1, further comprising the step of: asserting the early receiving interrupt signal, when data amount of the packet already moved into the data buffer excesses the threshold value.

5. The method of claim 1, wherein the packet-switching network is Ethernet.

6. A packet receiving apparatus, comprising:

a descriptor for handling a packet;

a data buffer linked to the descriptor for storing the packet, wherein the data

buffer has a fixed size; and

a controller for receiving the packet, when the controller has moved a specified length of the packet above a threshold value to the data buffer, asserting an early receiving interrupt signal; when the controller has completely moved the whole packet to the data buffer, asserting a ready interrupt signal;

in response to the early receiving interrupt signal, starting to read the packet stored in the data buffer; and in response to the ready interrupt signal, retrieving and forwarding the remained packet data.

7. The packet receiving apparatus of claim 6, wherein the controller performing a write-back operation on the descriptor after all the packet data stored in the data buffer have been forwarded so as to reset the descriptor.

8. A packet receiving method for use on a packet-switching network for handling each received packet, comprising the steps of:

allocating one descriptor and one data buffer, the descriptor for recording a link status between the descriptor and the data buffer and a reception status of a packet, and the data buffer for storing the packet;

setting a threshold value;

determining whether the packet has completely been received;

if No:

asserting an early receiving interrupt signal, when a length of the packet above the threshold value has been moved to the data buffer;

checking the reception status of the packet in response to the early receiving interrupt signal;

retrieving the packet stored in the data buffer when the reception status of the packet indicate that the packet has not completely been moved to the data buffer;

and

retrieving the remained packet data stored in the data buffer when the reception status of the packet indicate that the whole packet has completely been moved to the data buffer; and

if YES:

asserting a ready interrupt signal and performing a write-back operation on the descriptor so as to reset the reception status of the packet when the whole packet has completely been moved to the data buffer; and

retrieving the remained packet data in response to the ready interrupt signal.

9. The method of claim 8, wherein the packet-switching network is Ethernet.